

Erzsébet Németh – Katalin Jakovác – Aranka Mészáros –
Péter Kollár – Viktor Várpalotai

Insight and Blight – Initiatives on Enhancing Financial Literacy in Hungary

SUMMARY: The standard of financial literacy affects the effective management of economic and income shocks both on the individual and national levels. Earlier surveys implied the ineffectiveness of financial literacy enhancing training programmes in Hungary. We surveyed the training organisations by using questionnaires and examined the characteristics of financial literacy courses along with the possible reasons for their ineffectiveness. The survey data were analysed by descriptive statistics and hypothesis tests. We found that four big organizations trained more than 90 per cent of the total 500 thousand people who attended such courses in recent years in Hungary. Students from elementary and secondary schools are heavily overrepresented in these courses. The courses are predominantly short; however, they cover multiple topics. Although some two fifths of the training programmes rely on public funds, only one third of them publish the syllabuses and training materials. We also found that the educational needs of the target groups are usually assessed; however, the effectiveness of the training programmes is usually not measured. We concluded that enhancing financial literacy in vulnerable social groups would require a more targeted support from the government. Additionally, in order to encourage the responsible and reasonable use of public funds, publicly funded financial literacy enhancing programmes should disclose reports on their effectiveness, they should publish course syllabuses and materials and apply quality control. Furthermore, it is crucial to revamp the practice of enhancing financial literacy in Hungary; the assessment and development of financial literacy should be realised with targeted funding in an organised, transparent and quality-controlled way.¹

KEYWORDS: financial literacy, enhancing financial literacy, survey

JEL CODES: I21, J24, M53

The financial products and services market has become extremely complex and risky by the 21st century. In order to make informed decisions on financial matters in our everyday lives, up-to-date knowledge, the understanding of correlations and certain skills, all in all, adequate financial literacy is necessary.² Decision makers today view adequate financial literacy as an essential skill for everyday life (Grifoni – Messy, 2012).

E-mail address: nemeth.erszebet@asz.hu

The development of financial literacy is in the joint interest of every economic agent. At the micro level, the households and enterprises with more advanced financial literacy have a greater chance of avoiding financial decisions which might incur high financial risks for them [expensive loans, scarce savings, lack of (home) budgeting and financial planning]. Furthermore, the research of *Klapper et al.* (2012) shows that more advanced financial literacy greatly helps individuals to tackle unexpected macro-economic and income-related

shocks. At the macro level, the more advanced financial literacy a society has, the more explicit the need is for transparent financial institutions, the more savings are available in the country and the more stable the financial system is (Widdowson – Hailwood, 2007). As a consequence, improving financial literacy is a major interest of the individuals/households, the players of the financial market and the state as well.

Financial institutions, budgetary institutions and the OECD conducted surveys and research on the financial literacy of the Hungarian population, and several papers were published on this topic as well. Overall, the researchers paint a rather bleak picture of the Hungarian level of financial literacy, and it is typically the same risks, gaps in knowledge and skills that arise from time to time.

THE RESEARCH CARRIED OUT BY OECD IN 14 COUNTRIES OF 4 CONTINENTS IN 2010 (Atkinson – Messy, 2012) scrutinised the differences in attitudes of different aspects of financial knowledge, behaviour and financial literacy from a sociodemographic perspective. The results show that while Hungarian respondents came first in the theoretical knowledge test, they were ranked penultimate in the practical application of the same. A repeated survey was conducted in 2015 (Pénziránytű, 2015), which showed that although fewer respondents had daily livelihood problems as compared to 2010, the population has become less conscious, prudent and proactive in terms of their finances and only half of the respondents had financial goals. Furthermore, only one in every four families had a budget, and the tendency was that fewer respondents were capable of resolving an interest calculation exercise as well.

ACCORDING TO SURVEYS AND RESEARCH CONDUCTED BY CREDIT INSTITUTIONS, the public is, in general, mistrustful of finances and service providers, and financial decisions are not

made based on adequate knowledge, experience and research. The population is characterised by a passive user's attitude, and they show very little interest in banking services currently not used by them. The lack of long-term financial planning (financial self-provision) is another issue pointed out by these surveys (Szalay, 2013).

The questionnaire used for THE HUNGARIAN SAO'S FINANCIAL LITERACY SURVEY (Béres et al., 2013) included general and sociodemographic, as well as savings, investments and credit related questions and calculation exercises. The research found that there is a significant difference between the actual and assumed financial knowledge of young people in higher education, and revealed that the students' financial literacy is primarily determined by actual life situations and experiences (which echo the findings of international studies as well). When looking at other factors, *Luksander et al.* (2014) came to the important conclusion that the financial literacy of individuals with secondary school finance-economics education is not more advanced than those without such background. This fact sheds some light on the extremely low effectiveness of secondary school education (which is also consistent with experiences in the US, for instance the *Willis* (2009) study on social costs and effectiveness of secondary school finance education). Another interesting finding is that, irrespective of the level of their finance-economics knowledge, students' risk aversion is considerably high; in total, three quarters of the age group of 18–25 years are risk averse (Huzdik et al., 2014). The conclusion to be drawn from the research is that risk appetite is primarily determined by factors such as current social attitudes, concerns, desires and experiences. The study of *Németh et al.* (2015) on emotional attachment to loans reveals that young people primarily obtain information from their parents to make financial decisions,

therefore, family patterns have a great impact on their attitudes and plans.

AS A MINISTRY OF HUMAN RESOURCES (EMMI) AND MINISTRY FOR THE NATIONAL ECONOMY OF HUNGARY (NGM) initiative, a situation assessment questionnaire involving all elementary and secondary schools in Hungary was put together in March 2015. The purpose of the survey was to assess the practice of financial and entrepreneurial education in elementary and secondary schools. The completion of the questionnaires was voluntary. Having processed the data and having completed their first-round evaluation, we can say (see EMMI, 2015) that one fourth of the respondents teaches finance and entrepreneurial studies to students in public education by following the guidelines set out in the National Curriculum. A further 10 per cent offer such subjects in allocated classes and an additional 9 per cent is planning to introduce these studies in their curricula. One of the main reasons for not offering finance and entrepreneurial studies in certain institutions is the lack of personal resources and capacity.

Various organisations launched financial literacy enhancing initiatives funded by either governmental or non-governmental (typically financial market) players, frequently the two in cooperation, in order to reduce the risks arising from the lack of skills and knowledge that are fundamental to making financial decisions. Such initiatives include: training courses, research projects, surveys, competitions, counselling, national or local projects, documents accessible on the internet, information sharing, applications, etc.

Major state actors engage more and more actively in strengthening the financial knowledge of the population, enhancing and spreading financial literacy; among others: the State Audit Office of Hungary (SAO), the Central Bank of Hungary (MNB), the EMMI, the NGM, as well as some background institutions

of ministries and educational institutions. The aim of the above listed institutions is to contribute to the enhancement of the knowledge of the public about matters related to finances, public funds, and the sharing of public dues, as well as to improve the attitudes and forms of behaviour related to (public) finances.

Enhancing the financial literacy of the public is also on the agenda of certain non-budgetary institutions, which are typically financial institutions, related non-profit organisations and foundations. Occasionally, these institutions even support foundations, projects and other institutions as part of their corporate social responsibility programmes. Besides, teaching and sharing consumer protection, entrepreneurial and other economy related knowledge are in the scope of the activities of several organisations.

The purpose of our research is to give a comprehensive picture of financial literacy enhancing initiatives in Hungary. The purpose of our research is related to the findings of our previously conducted survey as well. One of the most important findings of the financial literacy research carried out under the auspices of the State Audit Office of Hungary in 2013 is that the financial literacy of students with secondary school finance-economics education is not more advanced than those without such education. This finding raises the question: what factors explain such poor effectiveness of these training programmes in secondary school education.

Therefore, in our research we primarily sought the answers to what institutions teach these subjects and who they teach, what topics they cover, what teaching methods they use and how effective these courses are. Our research questions and hypotheses are detailed below:

■ *Who do financial literacy enhancement courses target?*

One aspect of organising training programmes, especially in case of profit-oriented organisations,

can be cost-efficiency, i.e. reaching out to a large target audience at a low cost. Knowing the relevant circumstances in Hungary, such goal is most feasible by providing training to students in public education. As a consequence, adults are trained by companies with specific training profiles.

H1 The programmes of financial institutions and other organisations funded by financial institutions are mainly targeted at the age groups in public education.

H2 Adults are mostly targeted by programmes offered by other companies.

■ *How many individuals have been reached by the organisations so far, and what is the social representation of such groups?*

A higher percentage of public education students receive financial literacy enhancing training compared to adults and individuals no longer in public education. This is due, on the one hand, to cost-efficiency, and on the other hand, to relatively easier accessibility.

H3 The students in public education and especially the secondary school age group are overrepresented in the financial literacy enhancing training programmes.

H4 The ratio of people over 25 participating in financial literacy enhancing programmes falls far short of demographic ratios.

■ *How are courses funded?*

Presumably, if the training organisation's own resources are supplemented by public funds, the number of participants may increase. Furthermore, participant contribution is more likely among individuals with own incomes.

H5 On average, programmes funded partially by public funds reach more participants.

H6 Generally, participants contribute to the funding of training programmes targeted at adults.

■ *What are the goals of the courses and what topics are covered?*

Organisations funded by financial institutions may use the training to promote their products, overshadowing topics that would facilitate the conscious use of financial products.

H7 Introducing and promoting certain financial products and investment opportunities are important training goals.

H8 Individual or household budgets and planning are not adequately emphasised in the topics covered by the courses.

■ *What is the duration of the courses?*

The ineffectiveness outlined in previous surveys may be related to the short duration of the courses. We expect, from a pedagogical point of view, that more stringent timeframes limit the number of topics covered in the training.

H9 The courses are very limited in time, they mostly consist of 1–4 classes. This is mostly the characteristic of programmes targeting public education students.

H10 We assumed that shorter courses cover fewer topics due to the time constraints.

■ *To what extent are syllabuses and course materials publicly available and accessible?*

The courses are deemed as intellectual properties, which may be protected.

H11 In most cases, training materials and syllabuses do not exist or are not published.

■ *Are needs assessed and is the effectiveness of the courses measured?*

One contributor to the ineffectiveness of financial literacy enhancing programmes could be the lack of feedback and self-reflection.

H12 In the majority of cases, effectiveness is not measured.

We strongly believe that our research will help the elaboration of a national strategy on enhancing financial literacy and creating infrastructure by analysing the above questions and hypotheses and by exposing the characteristics and deficiencies of the existing training systems and programmes, revealing good practices and defining training needs.³

The structure of our study is as follows: firstly, we describe the methodology of our research, secondly, we show the main findings of our questionnaire survey, and last, we share the conclusions.

METHODOLOGY

The scope of the questionnaire survey

We aimed to cover the highest number of financial literacy enhancing training participants possible when defining the database of involved organisations; we also made sure that organisations with considerable leverage in such programmes are included. In order to achieve these goals, we set up a database of 110 items based on information published on the internet and information received from the partners participating in SAO's financial literacy cooperation. We contacted the leaders and contact persons of the organisations in the database and other individuals as well in email, and asked them to complete our questionnaire on a voluntary basis. The questionnaires were completed in June 2015.

The structure of the questionnaire

Our goal was to create a questionnaire which includes all the financial literacy enhancing initiatives of the organisations/individuals, and provides a platform for describing and assessing such initiatives.⁴

The questionnaire consists of four large thematic sections and has 56 questions in total.

① Information about the organisation, individual (6 questions).

② Financial literacy training⁵ programme related topics, such as the goal, target audience, funding, duration, topics, methodology,

syllabus, course material, teachers, assessment of effectiveness and applicability of the training (25 questions).

③ Questions related to knowledge assessment and competitions, which were similar to the ones asked in the training section (17 questions).

④ Information related to⁶ other initiatives (8 questions).

The respondents completed the questionnaire by training programmes, assessments or competitions (a maximum of 4 programmes, assessments or competitions could be described in each category).⁷ Other financial literacy enhancing initiatives were reported by the respondents in a consolidated form. The mandatory questions served as the frame of the questionnaire (29 questions, half of the total number). The respondents could give multiple answers in case of one third of the questions (19). We did not request any sensitive data (e.g. revenue) from the respondents.

Processing the questionnaires and assessment methodology

We systemised and statistically processed the answers to our questionnaire with the help of IBM SPSS Statistics and MS Excel program. We considered any questions not answered or any questions with invalid answers as missing data.⁸

We used descriptive and inferential statistical methods in our analysis: distribution calculation, cross tabulation analysis and test of independence. As for the test of independence, we used Pearson's chi-squared test and Fisher's exact test.⁹ The latter, unlike Pearson's chi-squared test, is not sensitive to a small number of sample items, which we had available in our database. We set the level of significance at 5 per cent to evaluate all tests.

63 organisations and companies out of the contacted 110 completed the questionnaire.¹⁰ 51 organisations out of the 63 respondents performed financial literacy enhancing activities, including training programmes, surveys, competitions or other initiatives.¹¹ Our study focuses on the analysis of financial literacy enhancing training programmes. According to our survey, a total of 35 respondents/organisations provide such training programmes. In our analysis we created 4 respondent categories.

▶ A respondent category emerged when analysing the samples; a category where the most important players of financial literacy enhancement belong.

▶ Respondents reaching over 10,000 people with their programmes, regardless of their organisational structure, qualify as **WIDE-REACH ORGANISATIONS**. Players reaching less than 10,000 people were classified into the following three groups (4 respondents).

▶ Financial institutions are in the **FINANCIAL INSTITUTIONS GROUP** (5 respondents).

▶ NGOs, non-profit organisations (typical associations and interest groups) and budgetary institutions are classified in the **NON-PROFIT ORGANISATIONS GROUP** (14 respondents).

▶ Any other educational, training and counselling companies and sole proprietors are in the **OTHER COMPANIES GROUP** (14 respondents).

Figure 1 clearly shows the importance of different categories, as the number of people reached by training programmes of wide-reach organisations is significantly higher than that of the rest of the respondents.

The respondents had the opportunity to give feedback about various training programmes, thus we processed 40 training programmes in total.¹² Wide-reach respondents gave feedback about 7 training programmes, the financial institutions, non-profit organisations and other companies about 5, 15 and 13 training programmes, respectively.

RESULTS

We describe our findings grouped by the questions asked. The descriptive statistics are occasionally followed by the results of the statistical tests. Each subchapter is concluded with a comparison of the survey results and our hypotheses.

Who is targeted by financial literacy enhancement courses?

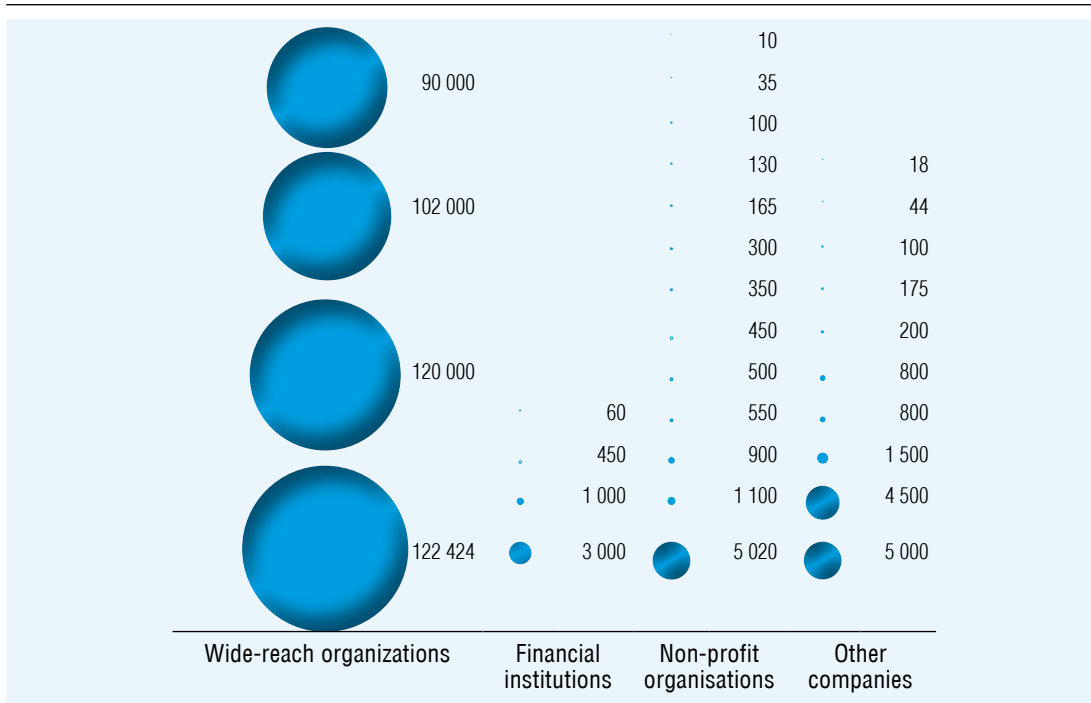
The target groups of each training programme vary greatly by the respondent categories (*see Figure 2*).¹³ All training programmes organised by wide-reach organisations and financial institutions target public education students, and very rarely target other groups (merely one training programme each). 60 per cent of the training programmes organised by non-profit organisations target adults, while 40 per cent of them target public education students as well. A small percentage of non-profit organisation training programmes are directed at other target groups (higher education students or others). All training programmes organised by other companies target adults, however, half of them are also directed at public education students, while one third of them approach higher education students.

We examined the correlation between the respondent categories and the target groups with statistical tests. At 5 per cent significance level, both Pearson's chi-squared test and Fisher's exact test show correlation between the respondent categories and whether respondents target public education students *as well*.¹⁴ Similarly, the tests show significant correlation between respondent categories and whether respondents target adults *as well*.¹⁵

Our hypotheses H1 and H2 are therefore confirmed by the survey, as on the one hand,

Figure 1

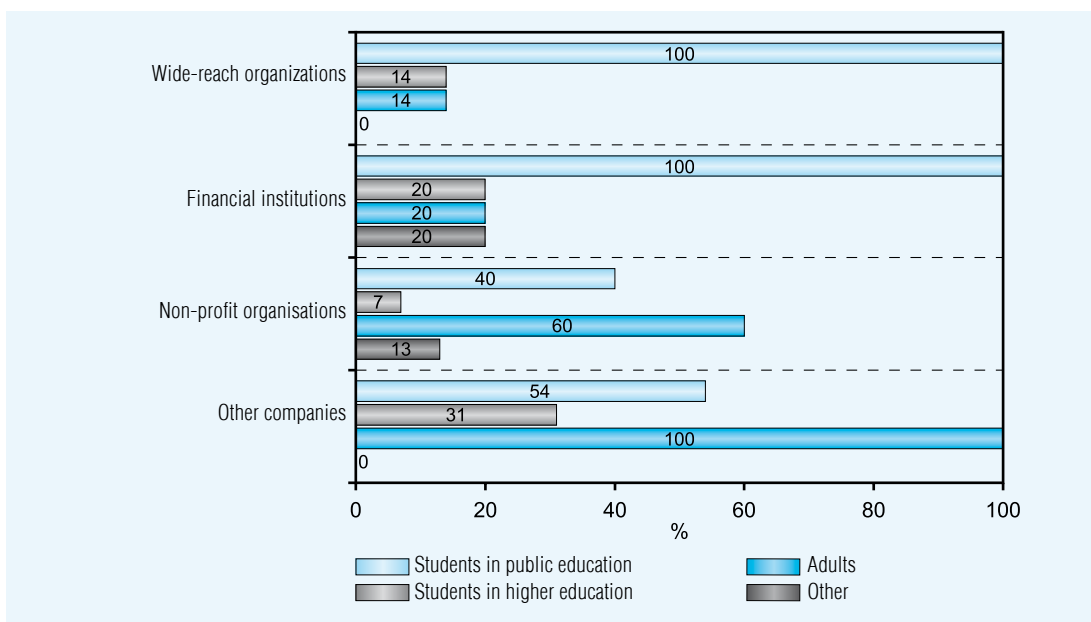
THE NUMBER OF PEOPLE (INDIVIDUALS) REACHED BY THE TRAINING PROGRAMMES OF THE 35 RESPONDENTS



Source: authors' own editing

Figure 2

TRAINING PROGRAMME TARGET GROUPS BY RESPONDENT CATEGORIES



Source: authors' own editing

the target group of training programmes organised by financial institutions and wide-reach organisations is mostly public education students, and on the other hand, adults as a target group are essentially targeted by programmes offered by other companies.

How many individuals were reached by the organisations, and what is the social representation of such groups?

We determined the groups reached by the training programmes by dividing the total number of participants – based on either the publicly available annual reports or on estimates¹⁶ in case such annual reports were not available – into two groups: public and higher education students and adults. In total, 461,681 individuals were reached by the respondents, out of which – based on our estimate – 341,613 individuals are public and higher education students and 120,068 individuals are adults. We must note that the actual number of individuals reached by these courses may be lower than the one indicated in this research, as there is a possibility of one individual participating in multiple training programmes.

Looking at each participant group by respondent categories, it can be concluded that the large majority of public and higher education students and adults (96 per cent and 90 per cent, respectively) participating in financial literacy enhancing training programmes are trained by wide-reach companies in Hungary (see Figure 3).

We also looked at the social representation of the groups included in the research. The distribution of each target group within the population was based on the data provided by the Central Statistical Office.¹⁷ Accordingly, age groups in public and higher education (6–24-year-olds) account for 22 per cent,

and adults (25+–year-olds) account for 78 per cent of the population over 5 years of age. In contrast, 81 per cent of training programme participants are public and higher education students, while only 19 per cent are adults. Comparing the ratio of target groups within the population and within the pool of training programme participants, we found (see Figure 4) that the ratio of public and higher education students who participated in the respondents' training programmes is four times higher than their ratio within the population (81 per cent to 22 per cent). At the same time, the ratio of adults reached by training programmes is one fourth of their ratio within the population (19 per cent: 78 per cent).

Our hypotheses H3 and H4 are therefore confirmed, as on the one hand, public and higher education students (especially secondary school students) are significantly overrepresented in the participants of financial literacy enhancing training programmes compared to their ratio within the population, while adults are considerably underrepresented compared to their ratio within the population.

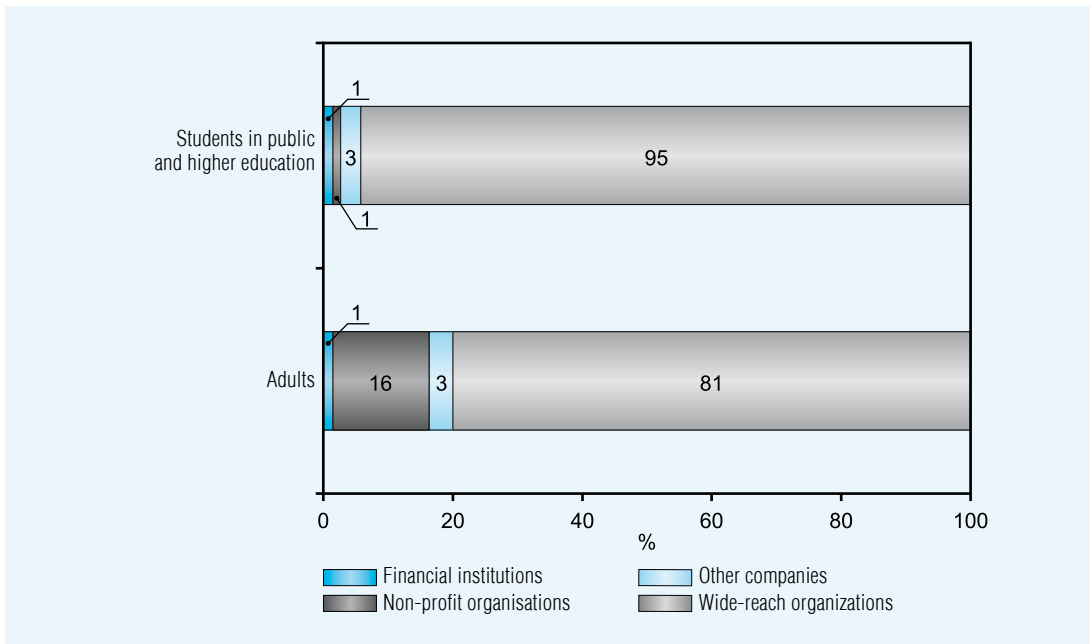
How are training programmes funded?

In our survey we also collected information on the funding of training programmes. It is important to note that, on the one hand, respondents had the chance to specify multiple financial resources linked to one specific training programme. On the other hand, answers on the financial resources of training programmes only show the existence of such resource and not their weight in the total funding of the training programme.¹⁸

Our findings on the funding resources of training programmes by respondent categories are as follows (see Figure 5). 86 per cent of the training programmes of wide-reach organisations do use own funds as well. Besides, 57 per

Figure 3

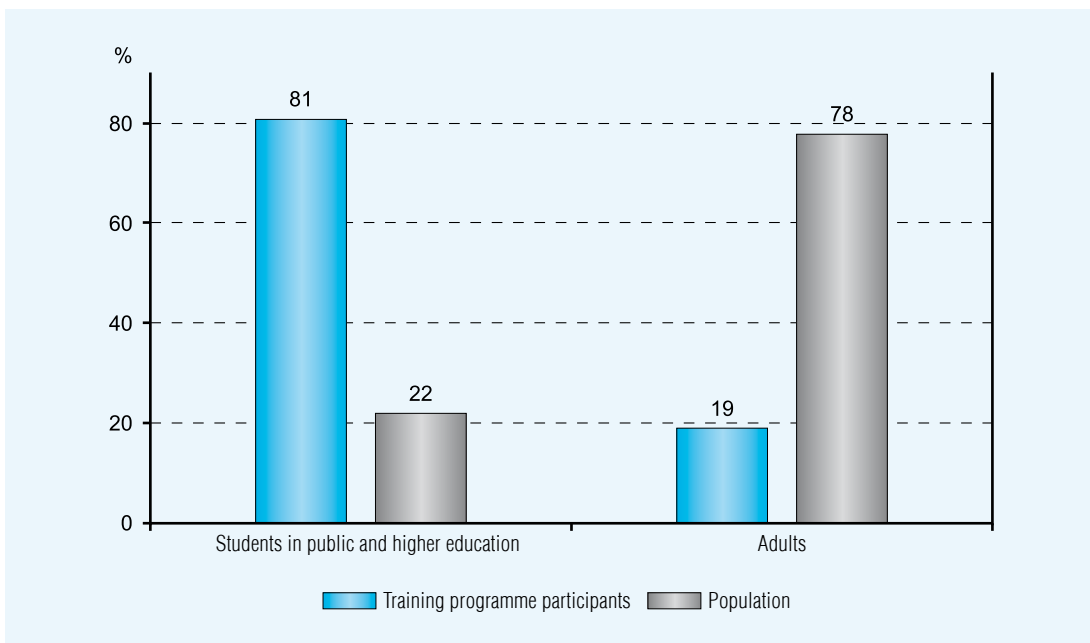
DISTRIBUTION OF THE NUMBER OF PUBLIC AND HIGHER EDUCATION STUDENTS AND ADULTS REACHED BY TRAINING PROGRAMMES OF EACH RESPONDENT CATEGORY



Source: authors' own editing

Figure 4

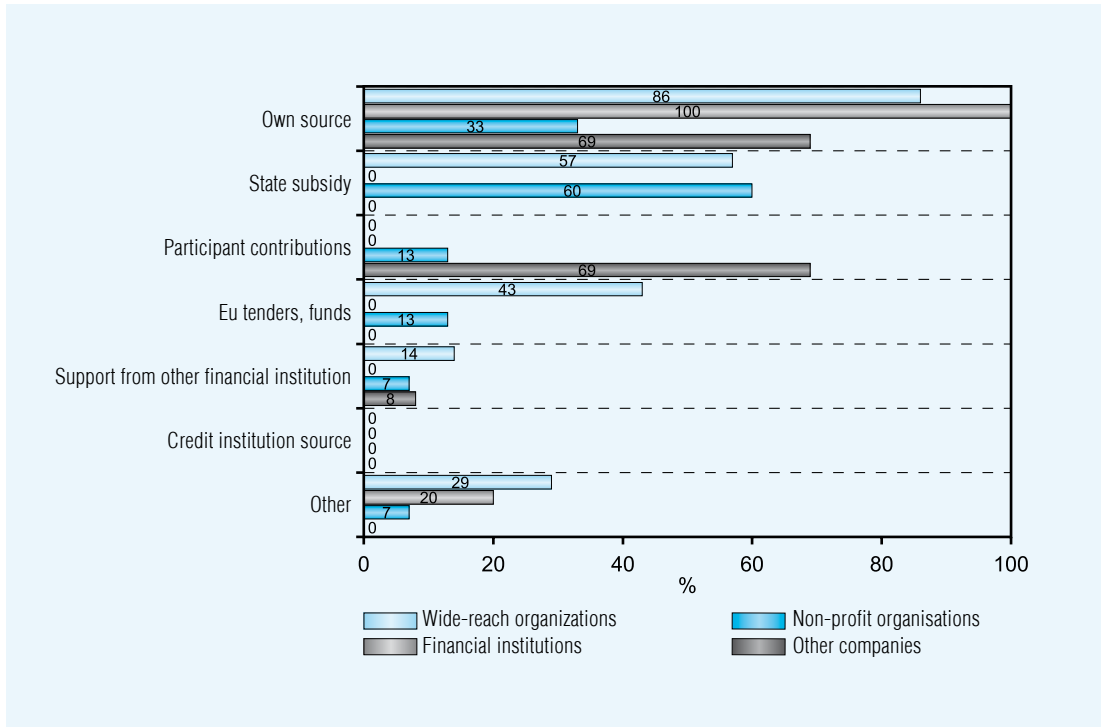
THE RATIO OF TARGET GROUPS IN TRAINING PROGRAMMES AND WITHIN THE POPULATION



Source: authors' own editing

Figure 5

FUNDING OF TRAINING PROGRAMMES BY RESPONDENT CATEGORIES



Source: authors' own editing

cent of such programmes – the second largest proportion of the respondent categories – also benefit from state funds. Benefiting from EU funds is also very common in this category (43 per cent). All training programmes organised by financial institutions are partially funded by their own resources. Training programmes held by non-profit organisations are mostly funded by the state (60 per cent), and one third of them also use their own resources. Unlike the other categories, other companies mention participant contribution as the largest resource (69 per cent), besides, own resources have a similarly significant role in funding their training programmes.

We examined with statistical tests whether the tendency seen in Figure 5, namely that the proportion of participant contribution is higher in training programmes targeting adults

compared to others targeting exclusively other groups, is valid and whether the correlation is significant. At a 5 per cent significance level, both Pearson's chi-squared test and Fisher's exact test confirmed the correlation.¹⁹

Furthermore, we examined whether training programmes funded partially by the state (state and/or EU funds) have more participants on average. We took training programmes of wide-reach organisations and non-profit organisations into account for the tests, as only these two respondent categories included programmes benefiting or not benefiting from state funds. Although the average number of participants in training programmes benefiting from state funds is quantitatively higher, the variance analysis at 5 per cent level of significance did not show correlation between state funds and participant numbers.²⁰

In line with hypothesis H5, programmes funded partially by public funds reach more participants on average, however, this difference is not statistically significant. At the same time, the survey confirms hypothesis H6, as the proportion of participant contributions is significantly higher in training programmes targeting adults than in those targeting exclusively other groups.

What are the key goals of the training programmes? How much emphasis is put on each topic?

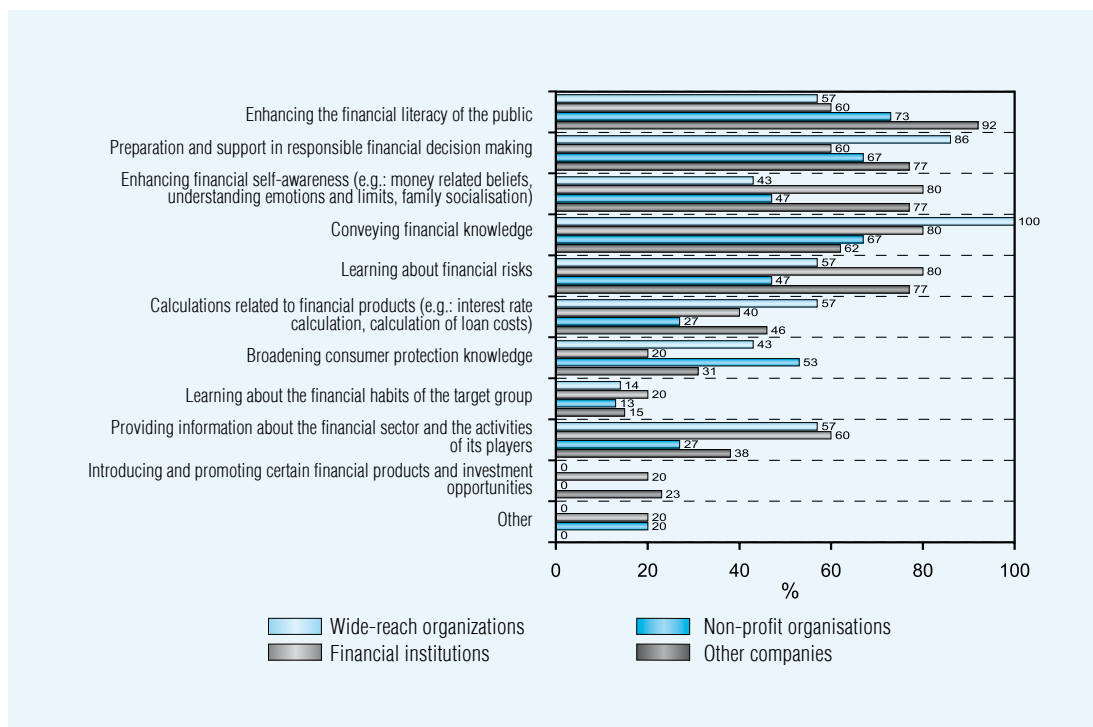
According to the answers given regarding training programme goals, wide-reach organisations put great emphasis on conveying financial knowledge

and the preparation of financial decision making (see Figure 6). Financial institution training programmes aim to improve financial self-awareness, convey financial knowledge and educate the participants on financial risks. The ratio of such goals in other respondents' feedback is also relatively high. More than half of the training programmes organised by non-profit organisations quote education on consumer protection as one of their goals. Other companies mostly indicated the following as their key goals: improving the financial literacy of the public, preparation of prudent financial decisions, improving financial self-awareness and education on financial risks.

The questionnaire raised the question of the significance of such topics in the training programme.²¹ Accordingly, household/indi-

Figure 6

THE MAIN GOALS OF THE TRAINING PROGRAMMES BY RESPONDENT CATEGORIES



Source: authors' own editing

vidual budgets and planning, financial self-awareness and savings are the topics with the most significance in wide-reach organisation training programmes (see Figure 7). Financial self-awareness, household/individual budgets and planning and indebtedness are the most dominant topics in training programmes provided by financial institutions. Financial self-awareness and household/individual budgets and planning weigh in most in non-profit organisation training programmes. Here we can highlight the relatively high significance of consumer protection education as compared to the other three respondent categories. In the training programmes of other companies, a greater emphasis is put on financial self-awareness, household/individual budgets and planning, investments, savings and banking services.

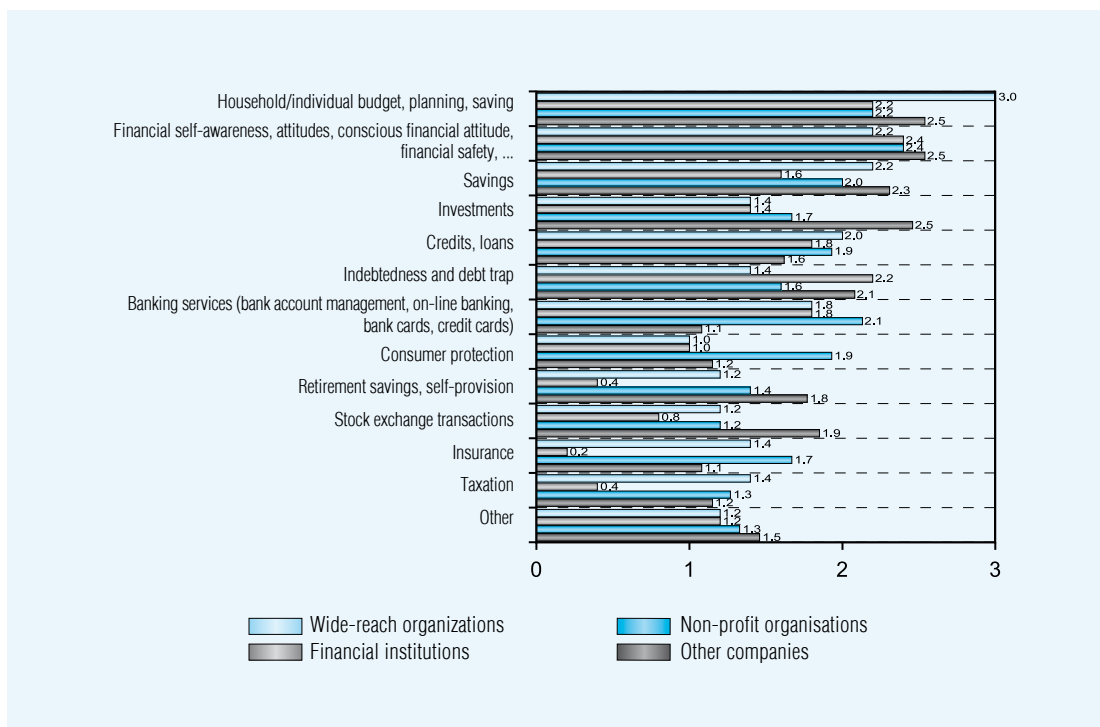
As a consequence, our hypothesis H7 is not confirmed by the survey, as the promotion of certain financial products and investment opportunities has no considerable significance in training programme goals – including especially financial institution programmes. Furthermore, the survey does not confirm hypothesis H8 either, as household/individual budgets and planning are one of the topics with the most significance in all respondent categories.

What is the duration of the courses?

Almost half of the training programmes organised by the surveyed organisations are rather short, they last for half a day as a maximum. 28 per cent are 1–2 hours, 20 per cent

Figure 7

AVERAGE SIGNIFICANCE OF TOPICS BY RESPONDENT CATEGORIES



Source: authors' own editing

are 3–4 hours long. Apart from one course each, training programmes of wide-reach organisations and financial institutions are merely 1–2, or 3–4 hours long (see Figure 8). Longer training programmes are typically held by non-profit organisations and other companies – the latter in an even larger proportion.

The correlation outlined by Figure 8, meaning that the duration of the training programmes is mainly short at wide-reach organisations and financial institutions, while the ratio of longer training programmes organised by non-profit organisations and other companies is higher, was examined with Pearson’s chi-squared test and Fisher’s exact test as well. According to the results, neither test showed a significant correlation.²²

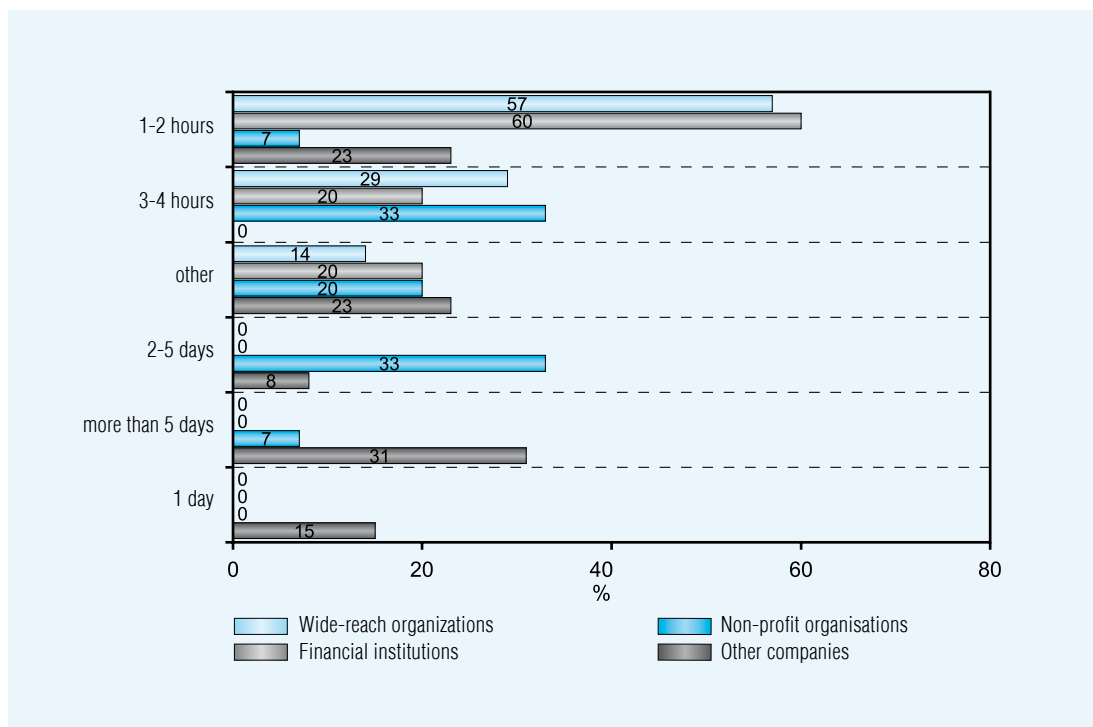
We also examined whether there was a cor-

relation between duration and target groups by running tests on defining any correlation between the duration of training programmes targeting secondary school students and programmes targeting exclusively other groups. Pearson’s chi-squared test and Fisher’s exact test both show correlation between the duration of the training programmes and the target groups at a 5 per cent level of significance.²³

We also looked at any possible correlation between the length of the training programme and the number of topics that the courses cover.²⁴ According to Figure 9, which shows the average and the median of the number of topics covered by the courses, we can say that shorter courses cover more topics than longer ones in terms of the average and the median. For the statistical testing of this correlation,

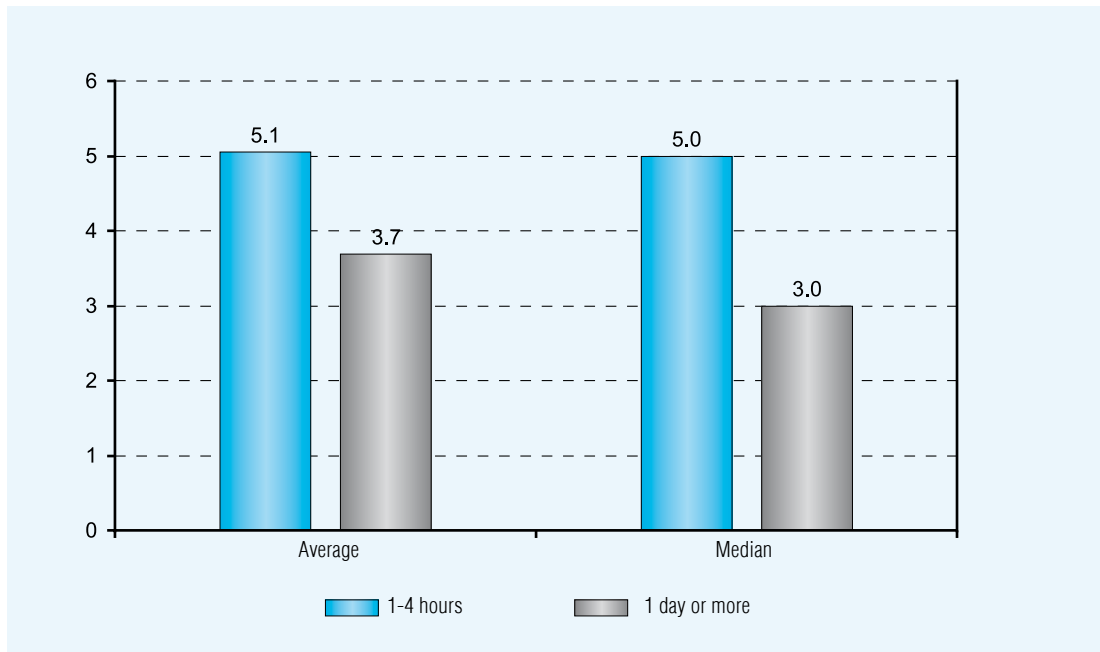
Figure 8

BREAKDOWN OF THE DURATION OF TRAINING PROGRAMMES BY RESPONDENT CATEGORIES



Source: authors' own editing

THE AVERAGE AND MEDIAN OF THE NUMBER OF TRAINING PROGRAMME TOPICS WITH A DURATION OF 1-4 HOURS OR LONGER



Source: authors' own editing

we applied the Mann-Whitney nonparametric test based on the prior condition tests. We compared 1–4-hour courses with longer ones and the test did not show any correlation at a 5 per cent level of significance.²⁵

The survey data confirmed hypothesis H9, as the duration of the training programmes – especially the ones targeting public education students – is mainly short, i.e. 1–4 hours. The survey, however, did not confirm hypothesis H10, as shorter training programmes cover – although not significantly – more topics than longer ones.

To what extent are syllabuses and course materials available and accessible to the public?

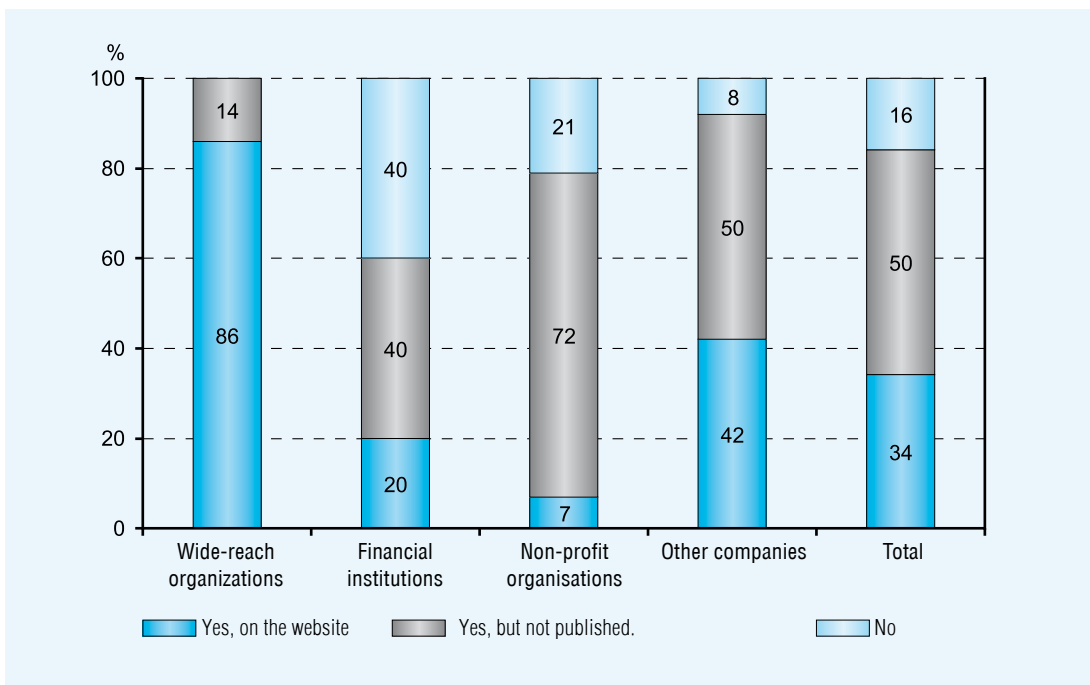
According to the responses we received, a small ratio, only 34 per cent of training programmes publish their syllabuses, 50 per

cent of them make them available, although not publicly and 16 per cent do not make them available at all (see Figure 10). The syllabuses of wide-reach organisation training programmes are accessible to the public on their websites, with the exception of one course. In case of financial institutions, only one syllabus is publicly available; half of the remaining four courses do have a syllabus, but it is not publicly accessible, while the other half of the courses do not have a syllabus at all. No syllabuses are available for non-profit organisation training programmes, apart from one, and one in five courses does not even have a syllabus. More than two fifths of the syllabuses of other companies' courses are available, while half of their syllabuses are not accessible to the public.

Publicly accessible syllabuses do not entirely meet the requirements. Although the training goals, the target groups, the duration and

Figure 10

COURSE SYLLABUS ACCESSIBILITY AND AVAILABILITY



Source: authors' own editing

the topics are typically determined, no necessary prior knowledge or prerequisites, training materials or the teacher are normally specified.

We found that the availability and accessibility of training programme materials are even lower than that of training syllabuses. In total, 76 per cent of the materials are not publicly available, in which 21 per cent does not even have training materials at all (see Figure 11).

Looking at the respondent category breakdown, we can see that wide-reach organisations and financial institutions have the highest ratio of available training material, still this proportion only amounts to approximately 40 per cent. 79 per cent of non-profit organisation courses and 92 per cent of other companies' courses have no publicly available training materials.

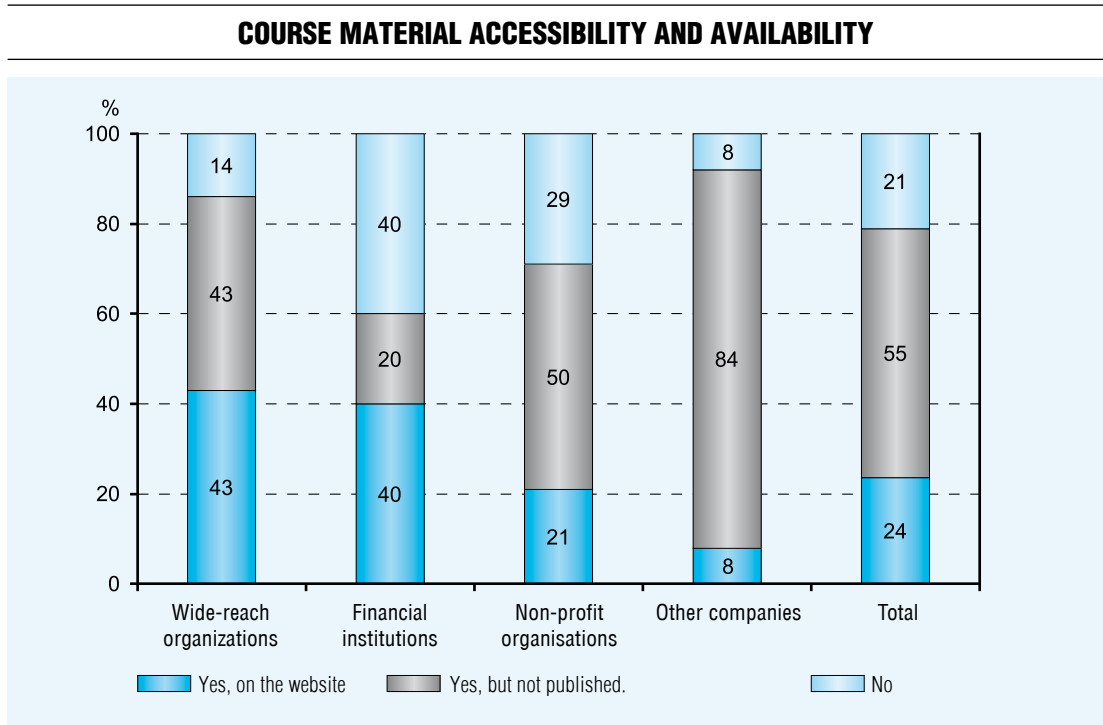
The survey data confirmed hypothesis H11, as more than two thirds of the training syllabuses and materials are not publicly available.

Are the requirements assessed and is the effectiveness of the courses measured?

According to the feedback from our respondents, the vast majority of the programmes (82 per cent) do assess needs and requirements when developing training programmes (see Figure 12). This dominance can also be witnessed in the respondent categories as well; 80 per cent of the wide-reach organisations and the financial institutions, 93 per cent of non-profit organisations and 69 per cent of other companies indicated that they assess target group requirements.

The respondents could provide multiple answers to whether programmes measure the effectiveness and efficiency of the courses. In total, 71 per cent of programmes gauge participant satisfaction with surveys, however, only 32 per cent of the programmes actually measure the effectiveness of the given course (see

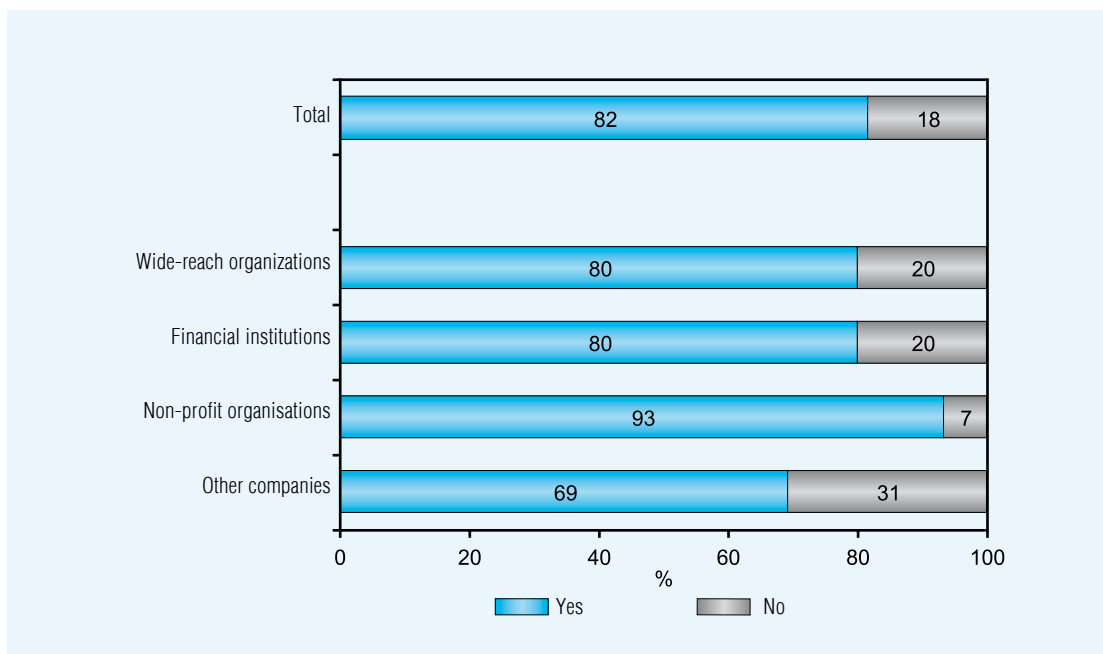
Figure 11



Source: authors' own editing

Figure 12

ARE THE REQUIREMENTS AND TRAINING NEEDS OF THE TARGET GROUPS ASSESSED WHEN DEVELOPING TRAINING PROGRAMMES?



Source: authors' own editing

Figure 13). However, only 8 per cent of the programmes test knowledge at the beginning and at the end of the course, namely the actual improvement as a result of the course. Looking closely at the respondent category breakdown, we must highlight that wide-reach organisations – almost exclusively – have the greatest proportion (40 per cent) in applying knowledge tests at the beginning and at the end of the programme.

Therefore, the survey confirmed hypothesis H12, as although participant satisfaction is generally surveyed, effectiveness is normally not looked into at all.

We examined whether there is a relationship between the duration of the courses and any knowledge tests during the course. However, we did not find a valid correlation between the two. We also examined whether experiences from the training programmes are used by the organisers and whether they are incorporated into the curricula. On the

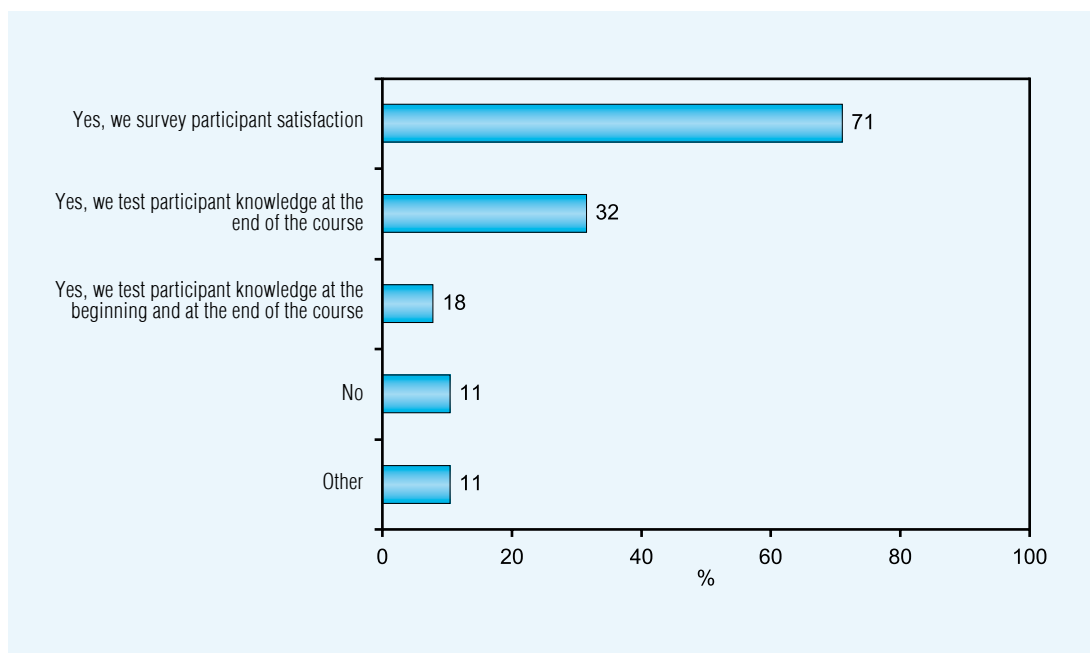
whole, a significantly high number of training programmes (94 per cent) incorporate training experiences into their curricula (see Figure 14). Based on the feedback, financial institutions and other companies incorporate their training experience into their curricula at all times. We only found 1 case each when non-profit organisations and wide-reach organisations do not incorporate their experiences to develop their training materials.

CONCLUSIONS

Previous surveys and studies shed light on the fact that the level of financial knowledge of the Hungarian public – and especially the younger generation – falls far behind the desired standard, even though a vast amount of resources are utilised to improve financial literacy. In addition, a direct proof of the ineffectiveness of training is that higher education students with

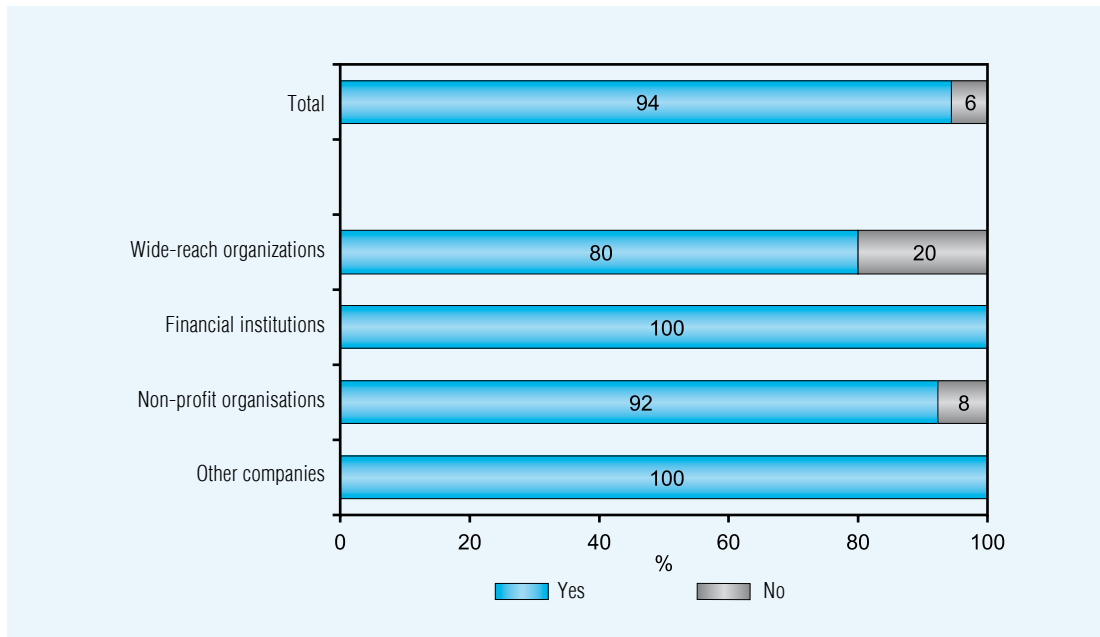
Figure 13

IS COURSE EFFECTIVENESS MEASURED AND IF SO, HOW?



Source: authors' own editing

ARE TRAINING EXPERIENCES UTILISED AND GET INCORPORATED INTO THE CURRICULA?



Source: authors' own editing

or without prior finance-economics education have the same level of financial literacy.

Our present survey revealed that one factor that might inhibit improvement is that although a high percentage of public education students benefit from financial literacy enhancing courses, such courses are rather short in length, they merely last a couple of hours. Furthermore, organisers fail to measure training effectiveness and therefore no consequent improvements are carried out in their curricula. It is very likely that limited course timeframes also inhibit conveying effective financial literacy knowledge in courses targeting public education students. Moreover, our survey found that shorter courses typically cover more topics limiting the time spent on each topic.

The lack of accessible and publicly available syllabuses and course materials also imposes risks. This is a particularly problematic aspect

of students' training programmes; neither parents, nor teachers, education authorities or taxpayers have sufficient information about the subject matter, approaches or methods applied in the courses.

The cross tabulation analysis highlighted further correlations. Organisations primarily targeting public education students with their programmes and courses typically fund their programmes from public (EU and central budget resources) and financial institution funds. However, we deem the following as a risk: there is no information available on the training effectiveness of such training programmes benefiting from billions of forints of public funds, as organisers do not measure the effectiveness of the courses. It may be appropriate, in order to improve responsible and informed use of public funds, for publicly funded financial literacy enhancing programmes to disclose reports on their effectiveness, to pub-

lish course syllabuses and materials and apply quality control.

The results of our survey show that the ineffectiveness of programmes may be caused by the lack of adequate quality control. Quality in education can be ensured by the followings elements:

- professional competency of the teachers,
- available and elaborate syllabus, tailored to the target group's needs and characteristics (the syllabus should include the goal, target group, length, set of requirements, content, materials and the teacher of the training programme),
- quality-controlled course materials (textbooks, workbooks and electronic knowledge base),
- training methods and course length suitable for the training goals,
- measuring the effectiveness of the training programme.

In order to guarantee effective courses in the future, the above mentioned elements of quality and effectiveness should definitely be strengthened. It is also important that each training programme be accessible and assess-

able, and that the scattered and independent initiatives of today one day become one integrated system of training programmes.

Our research found that financial literacy enhancing training programmes of organisations benefiting from vast amounts of public funds do not reach out to the target groups most in need of education (for instance, low-income or unemployed individuals). Besides, as the vast majority of courses targeted at adults are funded by participant contributions, low-income individuals will not be able to attend such courses. Currently, courses targeting adults only reach an insignificant amount of disadvantaged people, therefore, we cannot expect such courses to help measurably improve the financial literacy of the public. It is worth considering that publicly funded courses should be provided not only to students, but also to adults in the future. With appropriate targets and adequate quality control, a financial knowledge, attitude and behaviour enhancing training system could be set up, reaching a wider audience and having a palpable effect at micro and macro levels alike in Hungary.

NOTES

¹ The authors would like to thank Senior Auditor Counsellor Bálint Molnár for his help with the preparation of the research. Further findings of the research are published by Németh et al. 2016.

² Financial literacy is defined in various ways; definitions typically grasp the meaning of this notion as financial knowledge and awareness, the understanding of financial processes and the ability to make financial decisions (see Kovács et al., 2013). According to the definition developed by the National Bank of Hungary in 2008, which was also used for this research, financial literacy is a level of financial knowledge and skills that enables individuals to identify the

fundamental financial information required for making their conscious and prudent decisions; and after obtaining these data, allows them to interpret said data, as well as to make decisions on their basis, while assessing the potential future financial and other consequences of their decisions.

³ Having examined the OECD survey data, Grifoni – Messy (2012) point out that governments rely on three streams of information when defining national strategy priorities for financial education. They typically rely on national surveys, data provided by consumer protection authorities and experiences shared by other countries.

- ⁴ When compiling the questionnaire, we also took international experiences into account, with special regard to the research on financial literacy enhancing initiatives in 2013 supporting the strategic planning of the Australian government (National Financial Literacy Stocktake Survey, 2013). The questionnaire is available at <http://goo.gl/forms/YIZhfg1epN>.
- ⁵ We considered organised courses and information sharing as training held at any location (mostly at schools, premises provided by the organiser or other locations), or conducted on the internet or via email.
- ⁶ We classified every initiative not qualifying for any of the other categories under this section, such as information sharing via website, social media pages and emails (news items, analyses, other information, newsletters, etc.), preparation of printed documents and audiovisual materials, counselling, IT applications (games, budget planning programs, videos, etc.).
- ⁷ We created and the respondents completed the questionnaire in Google Forms.
- ⁸ Therefore, the sample items or the totals taken into account when examining the survey questions are less than the number of respondent organisations or the number of courses entered by the organisations.
- ⁹ We used the application available at the following website to carry out Fisher's exact test: http://www.physics.csbsju.edu/stats/exact_NROW_NCOLUMN_form.html
- ¹⁰ One of the major players of financial literacy enhancing programmes in Hungary, namely OTP Fáy Alapítvány, did not complete the questionnaire. Our survey would have given an imperfect picture without this organisation's activities, therefore, we completed our database with information publicly available about the training programmes of OTP Fáy Alapítvány.
- ¹¹ We must add that in many cases, respondents considered training, events and lectures held in front of a large audience as training programmes. Hereinafter these will be collectively referred to as 'training' or 'training programme'.
- ¹² In some cases, respondents gave their feedback on training programmes in a consolidated way, therefore, the number of training programmes in the survey is less than the number of actually offered training programmes.
- ¹³ The evaluation is based on the answers given to the question 'Who is targeted by financial literacy enhancement courses?'. Respondents could mark multiple answers given that their training programmes target more than one group.
- ¹⁴ The *p*-value of Pearson's chi-squared test is 0.013, while the *p*-value of Fisher's exact test is 0.009. However, we doubt the validity of Pearson's chi-squared test, as over 20 per cent (2 out of 8) of the number of sample items in the cross tabulation analysis that we based our calculation on is less than 5.
- ¹⁵ The *p*-value of Pearson's chi-squared test is 0.002, while the *p*-value of Fisher's exact test is 0.001. However, we doubt the validity of Pearson's chi-squared test, since over 20 per cent (4 out of 8) of the number of sample items in the cross tabulation analysis that we based our calculation on is less than 5.
- ¹⁶ The number of public and higher education students equals to individuals taking part in courses exclusively targeted at public and higher education students + half of the individuals taking part in training programmes targeted at public and higher education students as well + 90 per cent of the number of individuals taking part in school training programmes. This method is likely to underestimate the number of public and higher education students, as according to other information, the vast majority

of the participants of training programmes targeting public and higher education students as well are in fact public and higher education students.

¹⁷ http://www.ksh.hu/docs/hun/xstadat/xstadat_eves/i_wdsd009.html

¹⁸ Therefore, it is possible that the respondent reports own resources as well as EU tenders as funding resources of the training programme, while 99 per cent of the funds of the programme come from the EU and only 1 per cent is from own resources.

¹⁹ The *p*-value of the Pearson's chi-squared test and of Fisher's exact test are both 0.001. We must add that we doubt the validity of Pearson's chi-squared test, as the number of sample items in one of the cells is less than 5.

²⁰ The *p*-value of the variance analysis is 0.562.

²¹ Survey respondents could provide four types of answers in the questionnaire on the significance

of topics. In the evaluation process we assigned numerical values to the different answers ('topic not covered'=0, 'low significance'=1, 'average significance'=2, 'high significance'=3) in order to be able to compare the significance of training programme topics by averaging.

²² The *p*-value of Pearson's chi-squared test is 0.081, while the *p*-value of Fisher's exact test is 0.061; this means that both tests were 'close to' disapproving the null hypothesis of independence of the two criteria.

²³ We can again doubt the validity of Pearson's chi-squared test due to the low incidence of numerosity. However, the *p*-value of both tests was similarly low at 0.002.

²⁴ We based the number of topics covered by the training programmes on the number of topics covered by certain programmes as specified by the respondents (see more in chapter 3.4).

²⁵ The *p*-value of the Mann-Whitney test was 0.084.

LITERATURE

ATKINSON, A. – MESSY F. (2012): Measuring Financial Literacy: Results of the OECD / International Network on Financial Education (INFE). Pilot Study, *OECD Working Papers on Finance, Insurance and Private Pensions*, No. 15, OECD Publishing, <http://dx.doi.org/10.1787/5k9csfs90fr4-en>

BÁRCZI, J. – ZÉMAN, Z. (2015): A pénzügyi kultúra és annak anomáliái (Financial Literacy and its Anomalies), *Polgári Szemle (Civic Review)*, Volume 11, Issues 1–3, http://www.polgariszemle.hu/?view=v_article&ID=659

BÉRES, D. – HUZDIK, K. – KOVÁCS, P. – SÁPI, Á. – NÉMETH, E. (2013): Felmérés a felsőoktatásban tanuló fiatalok pénzügyi kultúrájáról (Survey on the Financial Literacy of Young People in Higher Edu-

cation), Research Report, June 2013 <http://www.asz.hu/tanulmanyok/2013/kutatasi-jelentes-felmeres-afelsooktatásban-tanulo-fiatalok-penzugyi-kulturajarol/t353.pdf>

GRIFONI, A. – MESSY, F. (2012): Current Status of National Strategies for Financial Education; A comparative analysis and relevant practices, *OECD Working Papers on Finance, Insurance and Private Pensions*, No. 16, OECD Publishing <http://dx.doi.org/10.1787/5k9bcwct7xmn-en>

HUZDIK, K. – BÉRES, D. – NÉMETH, E. (2014): Pénzügyi kultúra versus kockázatvállalás empirikus vizsgálata a felsőoktatásban tanulóknál (An Empirical Study of Financial Literacy versus Risk Tolerance Among Higher Education Students), *Pénzügyi*

Szemle (Public Finance Quarterly), issue 2014/4 <http://www.asz.hu/penzugyi-szemle-cikkek/2014/penzugyi-kultura-versus-kockazatvallalas-empirikus-vizsgálata-a-felsőoktatásban-tanuloknál/huzdik-beres-nemeth-2014-4.pdf>

KLAPPER, L. – LUSARDI, A. – PANOS, G. A. (2012): Financial Literacy and the Financial Crisis. Netspar Discussion Papers, DP03/2012–007, <http://arno.uvt.nl/show.cgi?fid=122421>

KOVÁCS, P. – RÉVÉSZ, B. – ORSZÁG, G. (2013): A pénzügyi kultúra és attitűd mérése (Measuring Financial Literacy and Attitude). <http://www.eco.u-szeged.hu/download.php?docID=40014>

LUKSANDER, A. – BÉRES, D. – HUZDIK, K. – NÉMETH, E. (2014): A felsőoktatásban tanuló fiatalok pénzügyi kultúráját befolyásoló tényezők vizsgálata (Analysis of the Factors that Influence the Financial Literacy of Young People Studying in Higher Education), Pénzügyi Szemle (Public Finance Quarterly), issue 2014/2 <http://www.asz.hu/penzugyi-szemle-cikkek/2014/a-felsőoktatásban-tanuló-fiatalok-penzugyi-kulturajat-befolyasolo-tenyezok-vizsgálata-1/luksandera-2014-2.pdf>

NÉMETH, E. – BÉRES, D. – HUZDIK, K. (2015): The Attitude of Young Hungarian Adults to Loans, Journal of Business and Social Science, Vol. 6, No. 4; April 2015 http://ijbssnet.com/journals/Vol_6_No_4_April_2015/7.pdf

NÉMETH, E. – JAKOVÁC, K. – MÉSZÁROS, A., KOLLÁR, P., VÁRPALOTAI, V. (2016): Pénzügyi kultúra fejlesztési programok felmérése – Kutatási jelentés (Assessment of Financial Literacy Development Programmes – Research Report) https://www.asz.hu/storage/files/files/Publikaciok/Elemzesek_tanulmanyok/2016/penzugyi_kult_fejl_programok.pdf

SZALAY, GY. (2013): Pénzügyi alapismeretek a közoktatásban: eredmények és további lehetőségek (Financial Rudiments in the Public Education: Results and Further Possibilities), Financial Literacy Centre of the

National Bank of Hungary, Opening the School Year – National Professional Conference, 23 August, 2013 http://moderniskola.hu/sites/default/files/field/image/tanevnyito2013/prezik/penzugyi_alapismeretek_a_kozoktatásban.pdf

WIDDOWSON, D. – HAILWOOD, K. (2007): Financial literacy and its role in promoting a sound financial system, Reserve Bank of New Zealand: Bulletin, Vol. 70, No. 2, 2007 http://rbnz.govt.nz/research_and_publications/reserve_bank_bulletin/2007/2007jun70_2.pdf#page=37

WILLIS, L. E. (2008): Against Financial Literacy Education, Iowa Law Review, Vol. 94 http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1105384

Australian Securities and Investments Commission (2013): National Financial Literacy Stocktake Survey 2013 http://www.financialliteracy.gov.au/media/528627/report-375_nfls-stocktake-survey-2013.pdf

Ministry of Human Resources (EMMI) (2015): Számoljunk a jövővel! – Pénzügyi és vállalkozói ismeretek elmélyítése a köznevelésben (Count on the Future! Strengthening Financial and Entrepreneurial Knowledge in the Public Education) <http://szamoljunkajovovel.kormany.hu/szamoljunk-a-jovovel-penzugyi-es-vallalkozoi-ismeretek-elmelyitese-a-koznevelésben-eve>

MNB (2014): Tudás és érték, a Magyar Nemzeti Bank társadalmi felelősségvállalási stratégiája (Knowledge and Value, the Social Responsibility Strategy of the National Bank of Hungary), June 2014 <http://www.mnb.hu/letoltes/mnb-tarsadalmi-spreadlow-1.pdf>

Pénziránytű (2015): A Pénziránytű Alapítvány által lebonyolított pénzügyi kultúra kutatás fő eredményeinek bemutatása (The Presentation of the Main Findings of the Research on Financial Literacy Conducted by the Pénziránytű Alapítvány.) http://penziranytu.hu/sites/default/files/csatolmany/oecd_kutatasi_eredmenyek_2015_11_02.pdf